


STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☒

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER GORDON CREEK SE-29-14-8					
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT GORDON CREEK					
4. TYPE OF WELL Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>						5. UNIT or COMMUNITIZATION AGREEMENT NAME					
6. NAME OF OPERATOR GORDON CREEK, LLC						7. OPERATOR PHONE 403 453-1608					
8. ADDRESS OF OPERATOR 1179 E Main #345, Price, UT, 84501						9. OPERATOR E-MAIL rironside@thunderbirdenergy.com					
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) Burnside Bk599 Pg645			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>					
13. NAME OF SURFACE OWNER (if box 12 = 'fee') Lannie K. Burnside						14. SURFACE OWNER PHONE (if box 12 = 'fee') 435-687-2260					
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee') 32 West 100 North, Huntington, UT 84528						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')					
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>					
20. LOCATION OF WELL		FOOTAGES		QTR-QTR	SECTION	TOWNSHIP		RANGE	MERIDIAN		
LOCATION AT SURFACE		869 FSL 472 FEL		SESE	29	14.0 S		8.0 E	S		
Top of Uppermost Producing Zone		869 FSL 472 FEL		SESE	29	14.0 S		8.0 E	S		
At Total Depth		869 FSL 472 FEL		SESE	29	14.0 S		8.0 E	S		
21. COUNTY CARBON			22. DISTANCE TO NEAREST LEASE LINE (Feet) 462			23. NUMBER OF ACRES IN DRILLING UNIT 160					
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1940			26. PROPOSED DEPTH MD: 4127 TVD: 4127					
27. ELEVATION - GROUND LEVEL 7495			28. BOND NUMBER RLB0010790			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 91-5193					
Hole, Casing, and Cement Information											
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight	
SURF	11	8.625	0 - 450	24.0	J-55 ST&C	8.7	Class G	212	1.142	15.84	
PROD	7.875	5.5	0 - 4127	17.0	N-80 LT&C	10.0	Class G	359	2.69	10.7	
ATTACHMENTS											
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES											
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN						
<input checked="" type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP						
NAME Barry Brumwell			TITLE Vice President-Operations			PHONE 403 453-1608					
SIGNATURE			DATE 09/27/2011			EMAIL bbrumwell@thunderbirdenergy.com					
API NUMBER ASSIGNED 43007502510000			APPROVAL  Permit Manager								

RECEIVED: October 27, 2011

DRILLING PLAN and PROGRAM

Attached to UDOGM Form 3

GORDON CREEK, LLC.**SE-29-14-8**

SURFACE LOCATION: 868.98' FSL & 471.86' FEL

SE/4 of SE/4 of Section 29-14S-8E

Carbon County, Utah

1. SURFACE GEOLOGIC FORMATION

Emery Sandstone Member of the Mancos Shale

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

Mancos Blue Gate Shale top: 1,753' KB

Lower Blue Gate Bentonite Marker: 3,522' KB

Ferron SS: 3,657' KB

3. PROJECTED GAS & H₂O ZONES

While no groundwater is expected to be encountered, groundwater *may* be encountered within the Emery Sandstone Member of the Mancos Shale. Any water encountered will be reported on a Form 7 "Report of Water Encountered During Drilling". All indications of usable water will be reported.

Casing & cementing will be done to protect potentially productive hydrocarbons, lost circulation zones, abnormal pressure zones and prospectively valuable mineral deposits.

Surface casing will be tested to 500 psi and the Production casing will be tested to 1,500 psi, with a minimum of 1 psi/ft of the last casing string setting depth.

4. PROPOSED CASING AND CEMENTING PROGRAMS

Refer to EXHIBIT "A" for casing design information

A. CASING PROGRAM

HOLE SIZE (in)	CASING SIZE (in)	WEIGHT (#/ft)	GRADE	JOINT	DEPTH SET (ft)
17	12 ³ / ₄	40.5	H-40	ST&C	0 – 40
11	8 ⁵ / ₈	24.00	J-55	ST&C	0 – 450
7 ⁷ / ₈	5 ¹ / ₂	17.00	N-80	LT&C	0 – 4,127

B. CEMENTING PROGRAM

The 8 ⁵/₈" surface casing will be set and cemented full length with approximately 212 sacks of 0-1-0 Class "G" cement + 2% CaCl₂ + 0.25 #/sk of cellophane flakes mixed at 15.84 ppg (yield = 1.142 ft³/sk); volume based on nominal hole size + 100% excess. The cement will be circulated back to surface. In the event that the cement is not circulated back to surface, a 1" top out job will be performed with 0-1-0 Class "G" cement + 2% CaCl₂ + 0.25 #/sk of cellophane flakes mixed at 15.84 ppg (yield = 1.142 ft³/sk).

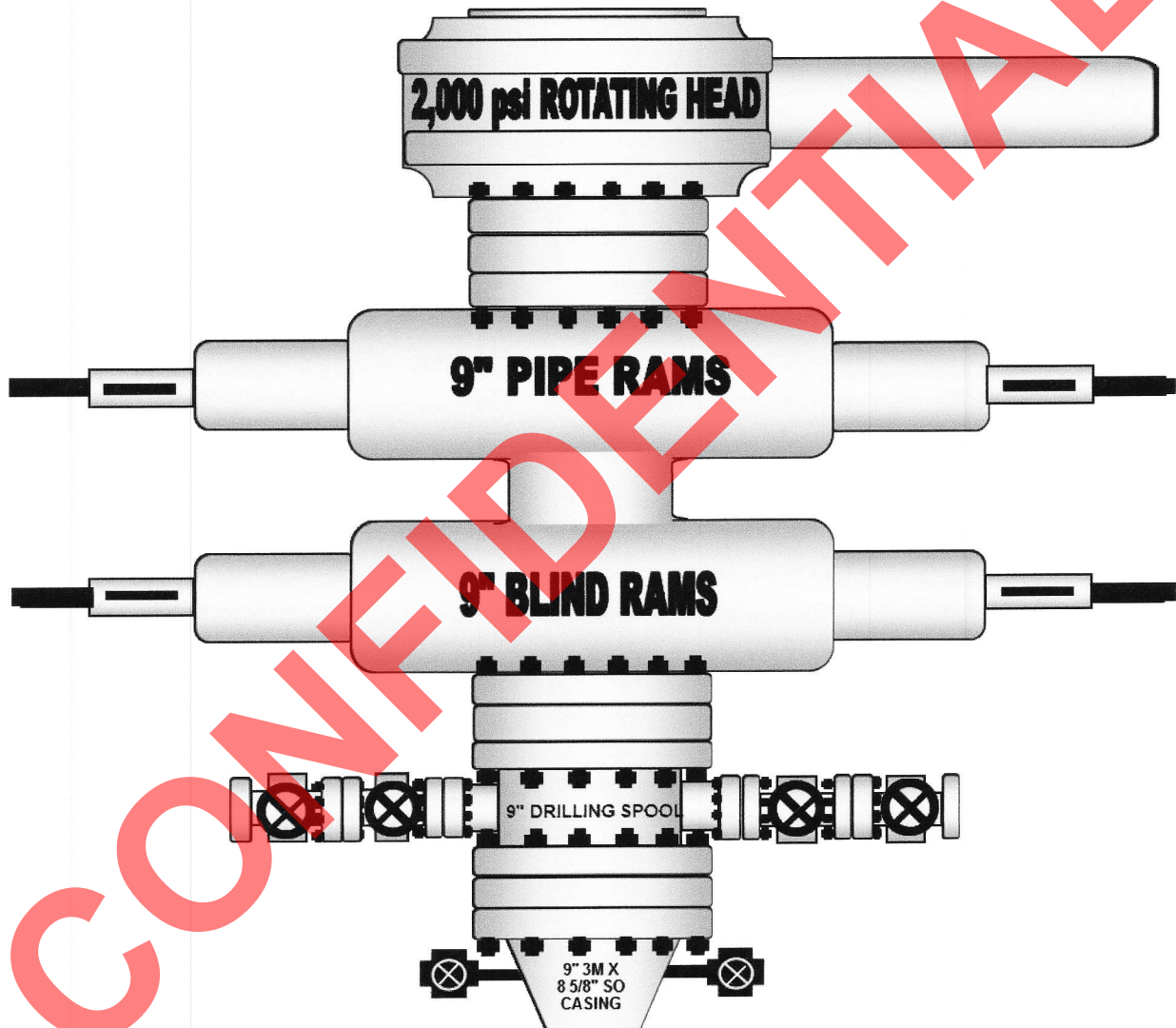
The 5 ½" production casing will be set and cemented full length using 359 sx of 0-1-0 "G" Light Weight cement incorporating 42% "SuperBall" centrospheres to lighten the cement density + 3% NaCl, 0.3% Air-out, 1.5% SFI-300, 0.2% SCR-2. The cement will be mixed at 10.7 ppg (yield = 2.69 ft³/sk); volume based on nominal hole size + 35% excess. The cement will be circulated back to surface.

THE FOLLOWING SHALL BE ENTERED INTO THE DRILLER'S LOG:

- I. Blowout preventer pressure tests, including test pressures and results;
- II. Blowout preventer tests for proper functioning;
- III. Blowout prevention drills conducted;
- IV. Casing run, including size, grade, weight, and depth set;
- V. How the pipe was cemented, including amount of cement, type, whether cement was circulated back to surface, location of the cementing tools, etc.;
- VI. Waiting on cement time for each casing string;
- VII. Casing pressure tests after cementing, including test pressures and results.

5. THE OPERATOR'S MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

Below is a schematic diagram of the blowout preventer equipment requirements for this drilling operation. A 9' X 3,000 psi double gate BOP will be used with a 2,000 psi Rotating Head utilized for air drilling operations. ALL BOPE will be pressure tested to the required operating pressures of each component. All tests will be recorded in the Driller's Report Book. The physical operation of each component of the BOP's will be checked on each trip.



6. THE TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATING FLUIDS / MUDS

0' – 450'	11" Surface Hole	Drill with air, will mud-up if necessary.
450' – TMD	7 ⁷ / ₈ " Main Hole	Drill with air, 500 psi @ 1500-2300 ft ³ /min

Will "mud up" at Total Depth to run logs and casing. Will mud up sooner if hole conditions dictate. It is anticipated that drilling fluid densities of 8.3 – 8.7 #/gal will be utilized when "mudded up".

7. THE TESTING, LOGGING AND CORING PROGRAMS

Open hole logs consisting of a CNL-LDT-GR-CAL will be run from above the Blue Gate Shale to TMD. A DIL-GR-SP log will be run from TMD to surface casing.

8. ANY ANTICIPATED ABNORMAL PRESSURES or TEMPURATURES

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. Bottom hole pressure expected is approximately 1250 psi maximum. No hydrogen sulfide or other hazardous gases or fluids have been found, reported or are known to exist at these depths in the area.

9. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS

The well will be drilled between late September and the end of November, 2011. Verbal and/or written notifications listed below shall be submitted in accordance with instructions from the Division of Oil, Gas & Mining:

- a) prior to beginning construction;
- b) prior to spudding;
- c) prior to running any casing or BOP tests;
- d) prior to plugging the well, for verbal plugging instructions.

Spills, blowouts, fires, leaks, accidents or other unusual occurrences shall IMMEDIATELY be reported to the Division of Oil, Gas & Mining.

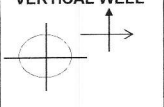
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<p>Survey Grd. Ele: 7,494.9'</p> <p>Est. KB Elev: 7,507'</p> <p>VERTICAL WELL</p>  <p>8.625" Casing Set @ ~450'</p> <p>TOPS ft TVD</p> <p>Emery Fm. Sfc.</p> <p>SURFACE CASING 450</p> <p>BASE OF GROUNDWATER TBD</p> <p>MUD UP ONLY IF WATER INFLUX OCCURS OR TIGHT HOLE CONDITIONS OCCUR</p> <p>Begin taking samples on Geologists orders</p> <p>Blue Gate Shale Mbr ** 1,753'</p> <p>Lower Bluegate Bentonite Marker 3,522'</p> <p>FERRON SS/COAL * 3,657'</p> <p>AIR DRILL THROUGH ZONE IF POSSIBLE</p> <p>Tununk Shale 4,069'</p> <p>* PRIMARY ZONE OF INT. ** SECONDARY ZONE</p> <p>TD 4,127'</p>	<p>BOP'S 9", 3000 # CASING BOWL</p> <p>11" Surface Hole</p> <p>7.875" Main Hole</p> <p>5.500" CASING SET AT 4,127'</p>	<p>EMERGENCY PLANNING ZONE SUMMARY</p> <p>SWEET WELL: THUNDERBIRD'S CORPORATE EMERGENCY RESPONSE PLAN APPLIES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="8">CASING DESIGN</th> </tr> <tr> <th></th> <th>Interval (ft)</th> <th>O.D. 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MUD UP at ~ 3,600' to TD.</td> </tr> </tbody> </table> <p>11" SURFACE HOLE</p> <ul style="list-style-type: none"> - Spud with an approved water well/surface casing rig and drill to surface TD of about 450 ft. Survey every 100'. Ensure that the surface hole deviation does not exceed 3 degrees. Set surface casing at least 50' below any water influx zone. - NOTE: MUD UP with Gel Chemical mud system immediately if water influx becomes problematic. Refer to the Mud Program and the Cementing Program for further information. Move rig off of location once surface casing is set. <p>7 7/8" MAIN HOLE: VERTICAL HOLE</p> <ul style="list-style-type: none"> - Move on conventional drilling rig and drill out with and AIR DRILL as far as possible with air. Survey every 300'. Ensure that deviation does not exceed 3 degrees. Notify Calgary operations immediately if a 3 degree deviation is exceeded. - TIGHT HOLE is possible on connections. REAM HOLE at first indication of tight hole and attempt to continue to air drill. - COAL/SHALE SEAMS can occur in the wellbore which may be faulted and unconsolidated resulting in sloughing hole conditions. - H₂S WILL NOT be encountered. - MUD UP ONLY if water influx occurs OR if tight hole conditions become prevalent. - OVER PRESSURE: Generally, all zones in the wellbore should be underpressured (below normal water gradient) or have normal pressure gradients. - LOST CIRCULATION should only have the potential to occur when drilling with fluids. - ENSURE AND ADEQUATE AMOUNT OF LCM IS ON LOCATION AT ALL TIMES. - FERRON SS/COAL PENETRATION - ATTEMPT TO AIR DRILL THROUGH THE FERRON ZONE. WATER may be encountered upon penetration. Ensure good hole conditions are prevalent to penetrating the FERRON. - MUD UP - switch to a Gel Chem drilling fluid system at ~3,600' OR if water/tight hole problems occur. - Mud Check - prior to POOH for logging, condition the mud and check mud properties with mudman. DO NOT POOH until the wellbore is circulating free of cuttings and the mud properties are optimal for logging. - NOTE: Ensure the well is cemented to surface on both casing strings. Contact the Operations Supervisor if any casing string cement job does not obtain returns to surface. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">SAMPLE REQUIREMENTS/ EVALUATION</th> </tr> </thead> <tbody> <tr> <td>T-BIRD</td> <td>Begin taking 2 sets of samples every 10 feet at 2,950' to TD</td> </tr> <tr> <td>GOVT:</td> <td>As per regulations</td> </tr> <tr> <td>Detection:</td> <td>Gas detection/ PASON Mud Log as per Geologist's request.</td> </tr> <tr> <td>Cores:</td> <td>No coring</td> </tr> <tr> <td>DST:</td> <td>No DST's</td> </tr> </tbody> </table> <p>LOGGING PROGRAM - NUMBER OF COPIES OF EACH LOG:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th># of copies</th> </tr> </thead> <tbody> <tr> <td>DIL-GR-SP T.D. to surface casing</td> <td>4</td> </tr> <tr> <td>CNL-LDT-GR-CAL T.D. to 2,950'</td> <td>4</td> </tr> </tbody> </table> <p>Run a multi-arm caliper log to ensure correct calculation for cement volumes on casing or plugs.</p>		CASING DESIGN									Interval (ft)	O.D. 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EXHIBIT "A"

CASING DESIGN
GORDON CREEK ST SE-29-14-8
PROJECTED TD: 4,127' KB

SURFACE CASING (0' – 450')

Diameter	8 ⁵ / ₈ "
Interval	450' to Surface
Weight	24 #/ft
Grade	J-55
Coupling	ST&C

Burst Design

The recommended practice is to base the burst rating of the casing string in psi to be at least numerically equal to 0.225 psi/ft times the setting depth in feet of the next casing string. The rating chosen was also intended to match the BOPE pressure rating and exceed the highest possible surface pressure of approximately 936 psig.

Burst required =	$0.225 \times 4,127$	929 psig
Burst rating of casing string:	2,950 psi	
Safety factor =	$2,950 \text{ psi} / 929 \text{ psi} =$	3.18

Collapse Design

Collapse pressure is negligible on this surface string.

Tension Design

String weight in air	10,800 #
Tensile strength of joint	244,000 lbf
Safety factor of joint	22.6

PRODUCTION CASING (0' – 4,127')

Diameter	5 ½"
Interval	4,161' to surface
Weight	17 #/ft
Grade	N-80
Coupling	LT&C

Burst Design

An internal pressure gradient of 0.4863 psi/ft has been used as a basis for these calculations. This gradient is equivalent to the force exerted by 10 ppg drilling fluid, which is a much higher density of fluid than we anticipate being required to drill this well.

Burst rating of casing string:	7,740 psi	
Burst rating required:	4,127' X 0.4863 =	2,007 psig
Safety factor =	7,740 psi / 2,007 psi =	<u>3.86</u>

Tension Design

1.6 Safety factor of top joint, neglecting buoyancy and without over pull.

Tensile rating of casing joint:	348,000 lbf	
String Weight:	4,127' X 17 #/ft =	70,159 lbf
Safety factor =	348,000 lbf / 70,159 lbf =	<u>4.96</u>

Collapse Design

Maximum anticipated mud weight is 10.0 ppg based on a mud gradient of 0.53 psi/ft.

Collapse rating of csg string:	6,280 psi	
Collapse rating required:	4,127' X 0.53 psi/ft =	2,187 psi
Safety factor =	6,280 psi / 2,187 psi =	<u>2.87</u>

Production Casing Design

Interval (ft)	Weight (#/ft)	Grade	S.F. Burst	S.F. Collapse	S.F. Tension
4,127' – 0'	17	N-80	3.86	4.96	2.87

MULTI-POINT SURFACE USE PLAN

Attached to UDOGM Form 3

GORDON CREEK, LLC.

SE-29-14-8

SURFACE LOCATION: 868.98' FSL & 471.86' FEL

SE/4 of SE/4 of Section 29-14S-8E

Carbon County, Utah

1. EXISTING ROADS

- a. We do not plan to change, alter or improve upon ANY existing State or County roads.
- b. Existing roads will be maintained in the same or better condition.

2. PLANNED ACCESS

- a. Access into location begins in Section 28 off of the Benches County road. The State of Utah School and Institutional Trust Lands Administration has granted Thunderbird Energy / Gordon Creek, LLC. A 60-day temporary access permit to utilize this access and roadway through the SE corner of Section 28. Access continues into and through Section 29 on land owned by Lanny Burnside with whom we have a surface use agreement verbally agreed to and which will be signed off by both parties imminently. The entire planned route will follow an existing and upgraded "2-track" trail that will be re-conditioned to ensure adequate access.
- b. If the well is productive, the road will be maintained as necessary to prevent soil erosion and maintain year-round traffic. However, we may allow the access road to be gated and closed off during winter production operations and access the site with a snowmobile or other winter ATV.
- c. Maximum Width: 24' travel surface with 27' base.
- d. Maximum grade: 25%
- e. Road culverts may be required. Surface water will be diverted around the well pad as necessary.
- f. Any power lines and / or pipelines to/from the well will follow the proposed access route.

3. LOCATION OF EXISTING WELLS

- a. As shown on the Civil Location Survey Plat for the well.

4. LOCATION OF EXISTING and/or PROPOSED FACILITIES

- a. If the well is a producer, installation of required production facilities will follow the drilling and completion phase of well operations. Buried flow lines, water lines and electrical cable will follow the proposed access road and other existing access ROWs to the intersection with Thunderbird's main 12' pipeline corridor.

- b. Rehabilitation of all pad areas not used for production facilities will be made in accordance with landowner stipulations.

5. LOCATION AND TYPE OF WATER SUPPLY

- a. All water to be used for drilling operations will be obtained from area water wells drilled and owned by Gordon Creek, LLC.
- b. Water will be transported to location by truck over approved access roads.

6. SOURCE OF CONSTRUCTION MATERIALS

- a. Any necessary construction materials needed will be obtained locally from a private source and hauled to the location on existing roads.
- b. No construction or surfacing materials will be taken from Federal / Indian lands.

7. METHODS FOR HANDLING WASTE DISPOSAL

- a. Rather than utilizing a "mud pit" on each drilling location, we will be utilizing one large "remote sump" pit per approximately 4-6 wells drilled to hold the drilled solids and drilling fluids required during the drilling of those 4 wells. This remote sump will be centrally located on one of the drilling locations. Three sides of the reserve pit will be fenced within 24 hours after completion of construction and the fourth side within 24 hours after drilling operations cease with four strands of barbed wire, or woven wire topped with barbed wire to a height of not less than four feet. The fence will be kept in good repair while the pit is drying.
- b. As the majority of each well is expected to be air drilled, a small reserve "blooie" pit will be constructed with a minimum of one-half the total depth below the original ground surface on the lowest point within the pit. The pit will not be lined unless conditions encountered during construction warrant it or if deemed necessary by the DOGM Representative during pre-site inspection. Three sides of the reserve pit will be fenced within 24 hours after completion of construction and the fourth side within 24 hours after drilling operations cease with four strands of barbed wire, or woven wire topped with barbed wire to a height of not less than four feet. The fence will be kept in good repair while the pit is drying.
- b. Following drilling, the liquid waste will be evaporated from any pit and the pit backfilled and returned to natural grade. No liquid hydrocarbons will be discharged to the reserve pit or location.
- c. In the event that wellbore fluids are produced, any oil will be retained in tanks until sold and any water produced will be retained until its quality can be determined. The quality and quantity of the water will determine the method of disposal.
- d. Trash will be contained in a portable metal container and will be hauled from location periodically and disposed of at an approved disposal site. Chemical toilets will be placed on

location and sewage will be disposed of at an appropriate disposal site.

8. ANCILLARY FACILITIES

- a. We anticipate no need for ancillary facilities with the exception of a trailer to be located on the drill site.

10. WELLSITE LAYOUT

- a. Gordon Creek, LLC. has reduced to surface lease size (area stripped and levelled) for this location to the smallest lease size possible to accommodate the required drilling rig and support equipment.
- b. Any available topsoil will be removed from the location and stockpiled. The location of the rig, mud tanks, reserve and berm pits and all other drilling support equipment will be located as per common oilfield rig layouts.
- b. A blooie pit will be located 100' from the drill hole. A line will be placed on the surface from the center hole to the blooie pit. The blooie pit will not be lined, but will be fenced on four sides to protect livestock/wildlife.
- c. Access to the well pad will be as shown on the Civil Location Survey Plat for the well.
- d. Natural runoff will be diverted around the well pad.

10. PLANS FOR RESTORATION OF SURFACE

- a. All surface areas not required for producing operations will be graded to as near original condition as possible and contoured to minimize possible erosion.
- b. Available topsoil will be stockpiled and will be evenly distributed over the disturbed areas and the area will be reseeded as prescribed by the landowner.
- c. Pits and any other area that would present a hazard to wildlife or livestock will be fenced off when the rig is released and removed.
- d. Rehabilitation will commence following completion of the well. Rat and mouse holes will be filled in immediately upon release of the drilling rig from the location. If the well site is to be abandoned, all disturbed areas will be re-contoured to the natural terrain found prior to location construction.

11. SURFACE OWNERSHIP

- a. The well site and access road are on and across lands owned by Lanny Burnside, with whom we have a surface use agreement verbally agreed to and which will be signed off by both parties imminently. The operator shall contact the landowner and the Division of Oil, Gas and Mining 48 hours prior to beginning construction activities.

12. OTHER INFORMATION

- a. The primary surface use is wildlife habitat and/or cattle grazing. The nearest dwelling is approximately 13.5 miles east (Price, Utah).
- b. If there is snow on the ground when construction begins, it will be removed before the soil is disturbed and piled downhill from the topsoil stockpile location.
- c. The back-slope and fore-slope will be constructed no steeper than 4:1.
- d. All equipment and vehicles will be confined to the access road and well pad.
- e. A complete copy of the approved Application for Permit to Drill (APD,) including all conditions and stipulations shall be on the well-site during construction and drilling operations.

There will be no deviation from the proposed drilling and/or workover program without prior approval from the Division of Oil, Gas & Mining.


13. COMPANY REPRESENTATIVE

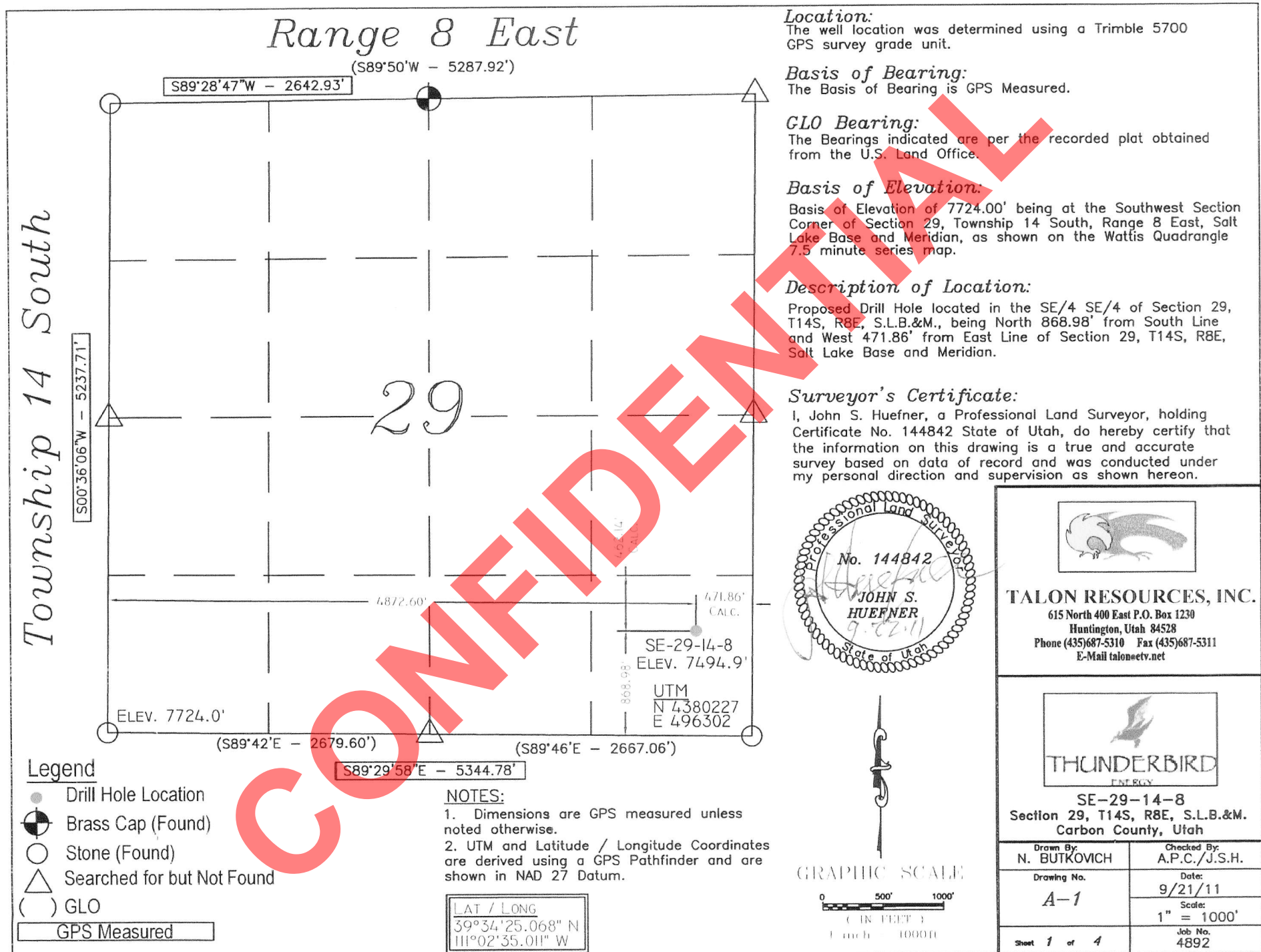
Barry Brumwell, C.E.T.
Vice President, Operations
Gordon Creek LLC., a wholly owned subsidiary of
Thunderbird Energy Corp.
#550, 1010 – 1st Street S.W.
Calgary, Alberta, Canada
(403) 453-1608 (office)
(403) 818-0696 (mobile)
bbrumwell@thunderbirdenergy.com

14. CERTIFICATION

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed by Gordon Creek, LLC. and its subcontractors in conformity with this plan and the terms and conditions under which it is approved.

10/19/2011
DATE

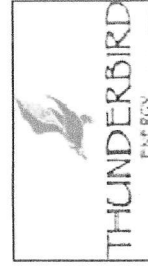

Barry Brumwell, C.E.T.
Vice President, Operations
Gordon Creek LLC. / Thunderbird Energy Inc.



ELEVATION OF UNGRADED GROUND AT LOCATION STAKE = 7494.9'
ELEVATION OF GRADED GROUND AT LOCATION STAKE = 7493.4'



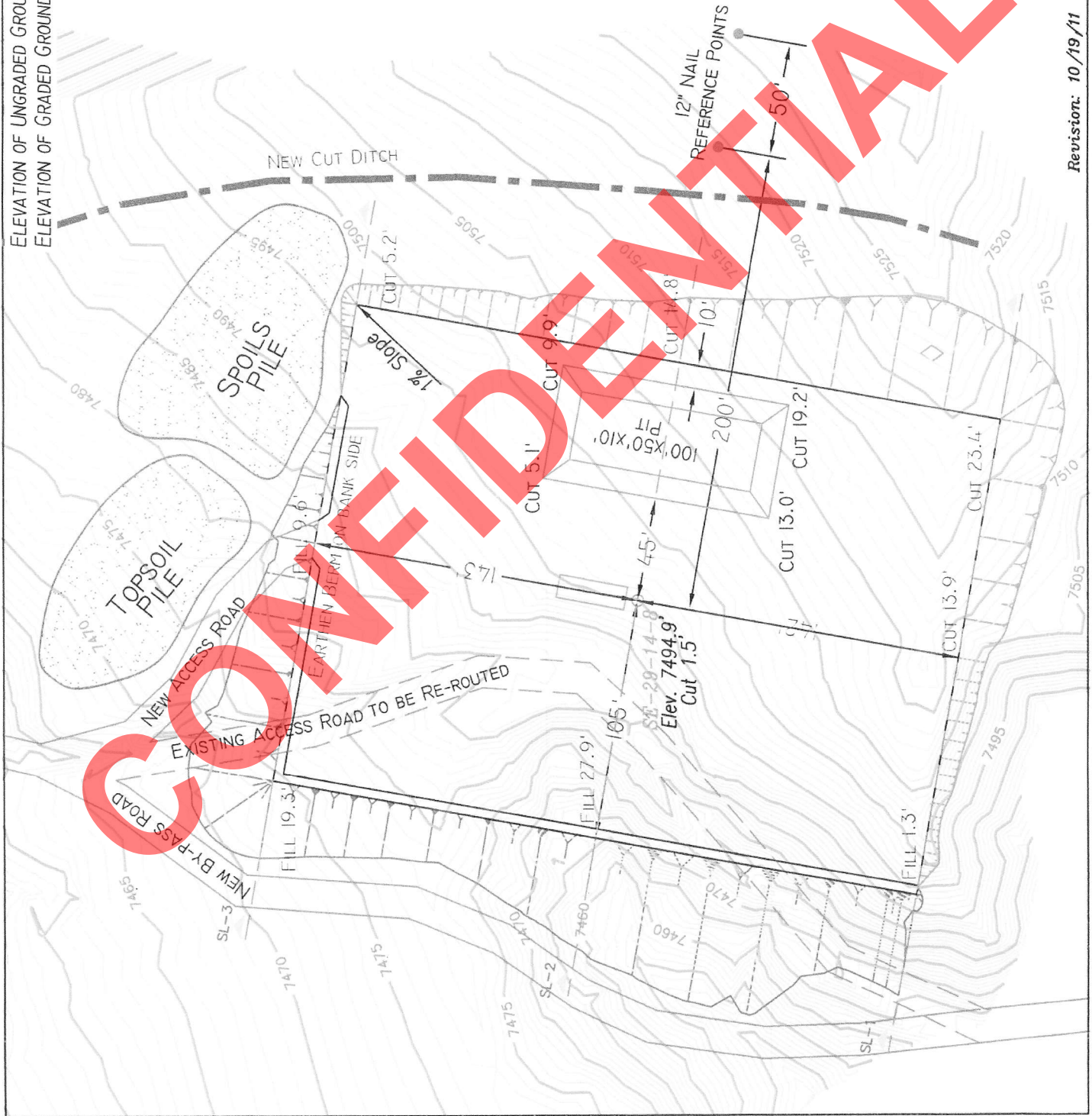
TALON RESOURCES, INC.
615 North 400 East P.O. Box 1230
Huntington, Utah 84528
Phone (435)687-5310 Fax (435)687-5311
E-Mail talonnetv.net



LOCATION LAYOUT
Section 29, T14S, R8E, S.L.B.&M.
SE-29-14-8

Drawn By: N. BUTKOVICH	Checked By: A.P.C.
Drawing No. A-2	Date: 9/21/11
	Scale: 1" = 60'
Sheet 2 of 4	Job No. 4892

Revision: 10/19/11





Thunderbird Energy

SE-29-14-8

UTM NAD 27

N-4380228

E-496302

Talon Resources, Inc.

615 N. 400 E., P.O. BOX 1230

Huntington, Utah 84528

(435) 687-5310

TN MN
12 1/2°

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 miles
0 1 2 3 4 5 km
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)



September 27th, 2011

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: *Affidavit of status of Surface Owner Agreement*

This letter may serve as notice that Gordon Creek, LLC., as a wholly owned subsidiary of Thunderbird Energy Corp. do hereby rightfully hold a Paid Up Oil and Gas Surface Use and Mineral Lease numbered Bk 599 Pg 645 for the following lands:

Township 14 South, Range 8 East, SLM

Section 29: SESE, NWNE

I certify this to be true and accurate, to the best of my knowledge.

Signed

Signed By:

Barry Brumwell, C.E.T.

Vice President of Operations

Thunderbird Energy

Gordon Creek, LLC.

Ent 113100 Bk 599 Pg 645
 Date: 25-AUG-2005 11:57AM
 Fee: \$16.00 Check
 Filed By: KR
 SHARON MURDOCK, Recorder
 CARBON COUNTY CORPORATION
 For: FOCUS ENERGY

599/645

PRODUCERS 88-PAID UP

OIL AND GAS LEASE

AGREEMENT, Made and entered into the 15th day of August, 2005, by and between Lannale K. Burnside, AKA Lanny K. Burnside and Kelly P. Burnside, husband and wife, whose post office address is PO Box 297, Huntington, UT 84528 hereinafter called Lessor (whether one or more) and Focus Energy LLC whose address is 216 16th Street, Suite 1220, Denver, CO 80202 hereinafter called Lessee:

WITNESSETH, That the Lessor, for and in consideration of Ten and more Dollars (\$10.00+) cash-in-hand-paid, the receipt of which is hereby acknowledged, and the covenants and agreements hereinafter contained, has granted, demised, leased, and let, and by these presents does grant, demise, lease, and let exclusively unto the said Lessee, the land hereinafter described, with the exclusive right for the purpose of mining, exploring by geophysical and other methods, and operating for and producing therefrom oil and all gas of whatsoever nature or kind, specifically including coalbed methane and any and all substances produced in association therewith from coal-bearing formations, with rights of way and easements for laying pipe lines, and erection of structures thereon to produce, save, and take care of said products, all that certain tract of land situated in the County of Carbon, State of Utah, described as follows, to-wit:

Township 14 South, Range 8 East, S1M
Section 29: SESE, NWNE
Section 30: SESW, N2SE
Section 31: Lot 7 (SESE)

including any interests therein which Lessor may hereafter acquire by reversion, prescription or otherwise. Notwithstanding any particular description, it is nevertheless the intention of Lessor to include within this lease, and Lessor does hereby lease, not only the land so described but also any and all other land owned or claimed by Lessor in the herein named survey or surveys, or in adjoining surveys, and adjoining the herein described land up to the boundaries of the abutting landowners, including all lands and rights acquired or retained by Lessor by avulsion, accretion, reliction or otherwise as the result of a change in the boundaries or centerline of any river or stream traversing or adjoining the lands described above, as well as all riparian lands and rights which may be incident, appurtenant, related or attributed to Lessor in any lake, reservoir, stream or river traversing or adjoining the lands described above, and further, all lands included in any road, easement or right-of-way traversing or adjoining the lands described above, which are or may be incident, appurtenant, related or attributed to Lessor by virtue of Lessor's ownership of the lands described above. For the purpose of determining the bonus or any other payments hereinafter provided for, said land is estimated to comprise 237.54 acres, whether it actually comprises more or less.

1. It is agreed that this lease shall remain in force for a term of five (5) years from this date and as long thereafter as oil or gas of whatsoever nature or kind, specifically including coalbed methane and any and all substances produced in association therewith from coal-bearing formations, is produced from said leased premises or on acreage pooled therewith, or drilling operations are continued as hereinafter provided. If, at the expiration of the primary term of this lease, oil or gas is not being produced on the leased premises or on acreage pooled therewith but Lessee is then engaged in drilling or reworking operations thereof, then this lease shall continue in force so long as operations are being continuously prosecuted on the leased premises or on acreage pooled therewith; and operations shall be considered to be continuously prosecuted if not more than ninety (90) days shall elapse between the completion or abandonment of one well and the beginning of operations for the drilling of a subsequent well. If after discovery of oil or gas on said land or on acreage pooled therewith, the production thereof should cease from any cause after the primary term, this lease shall not terminate if Lessee commences additional drilling or reworking operations within ninety (90) days from date of cessation of production or from date of completion of dry hole. If oil or gas shall be discovered and produced as a result of such operations at or after the expiration of the primary term of this lease, this lease shall continue in force so long as oil or gas is produced from the leased premises or on acreage pooled therewith.

2. This is a PAID-UP LEASE. In consideration of the down cash payment, Lessor agrees that Lessee shall not be obligated, except as otherwise provided herein, to commence or continue any operations during the primary term. Lessee may at any time or times during or after the primary term surrender this lease as to all or any portion of said land and as to any strata or stratum by delivering to Lessor or by filing for record a release or releases, and be relieved of all obligation thereafter accruing as to the acreage surrendered.

3. In consideration of the premises the said Lessee covenants and agrees:

1st. To deliver to the credit of Lessor, free of cost, in the pipeline to which Lessee may connect wells on said land, fourteen percent (14.0%) of all oil produced and saved from the leased premises.

2nd. To pay Lessor for gas of whatsoever nature or kind (with all of its constituents) produced and sold or used off the leased premises, or used in the manufacture of products therefrom fourteen percent (14.0%) of the actual amount received by the Lessor, said payments to be made monthly.

4. During any period (whether before or after expiration of the primary term hereof) when gas is not being so sold or used and the well or wells are shut in and there is no current production of oil or operations on said leased premises sufficient to keep this lease in force, Lessee shall pay or tender a royalty of One Dollar (\$1.00) per year per net acre covered hereby, such payment or tender to be made on or before the anniversary date of this lease next ensuing after the expiration of ninety (90) days from the date such well is shut in and thereafter on the anniversary date of this lease during the period such well is shut in, to the royalty owners. When such payment or tender is made, it will be considered that gas is being produced within the meaning of the entire lease.

5. If said Lessor owns a less interest in the above described land than the entire and undivided fee simple estate therein, then the royalties (including any shut-in gas royalty) herein provided for shall be paid to the Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee.

6. Lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for Lessee's operation thereon, except water from the wells of Lessor.

7. When requested by Lessor, Lessee shall bury Lessee's pipeline below plow depth.

8. No well shall be drilled nearer than 200 feet to the house or barn now on said premises without written consent of Lessor.

9. Lessee shall pay for damages caused by Lessee's operations to growing crops and livestock on said land.

10. Lessee shall have the right at any time to remove all machinery and fixtures placed on said premises, including the right to draw and remove casing.

11. The rights of Lessor and Lessee hereunder may be assigned in whole or part. No change in ownership of Lessor's interest (by assignment or otherwise) shall be binding on Lessee until Lessee has been furnished with notice, consisting of certified copies of all recorded instruments or documents and other information necessary to establish a complete chain of record title from Lessor, and then only with respect to payments thereafter made. No other kind of notice, whether actual or constructive, shall be binding on Lessee. No present or future division of Lessor's ownership as to different portions or parcels of said land shall operate to enlarge the obligations or diminish the rights of Lessee, and all Lessee's operations may be conducted without regard to any such division. If all or any part of this lease is assigned, no leasehold owner shall be liable for any act or omission of any other leasehold owner.

12. Lessee, at its option, is hereby given the right and power at any time and from time to time as a recurring right, either before or after production, as to all or any part of the land described herein and as to any one or more of the formations hereunder, to pool or unitize the leasehold estate and the mineral estate covered by this lease with other land, lease, or leases in the immediate vicinity for the production of oil and gas, or separately for the production of either, when in Lessee's judgment it is necessary or advisable to do so, and irrespective of whether authority similar to this exists with respect to such other land, lease, or leases. Likewise, units previously formed to include formations not producing oil or gas may be reformed to exclude such non-producing formations. The forming or reforming of any unit shall be accomplished by Lessee executing and filing of record a declaration of such unitization or reformation, which declaration shall describe the unit. Any unit may include land upon which a well has theretofore been completed or upon which operations for drilling have theretofore been commenced. Production, drilling, or reworking operations of a well shut in for want of a market anywhere on a unit which includes all or a part of this lease shall be treated as if it were production, drilling, or reworking operations of a well shut in for want of a market under this lease. In lieu of the royalties elsewhere herein specified, including shut-in gas royalties, Lessor shall receive on production from the unit so pooled royalties only on the portion of such production allocated to this lease; such allocation shall be that proportion of the unit production that the total number of surface acres covered by this lease and included in the unit bears to the total number of surface acres in such unit. In addition to the foregoing, Lessee shall have the right to unitize, pool, or combine all or any part of the described lands as to one or more of the formations thereunder with other lands in the same general area by entering into a cooperative or unit plan of development or operation approved by any governmental authority and, from time to time, with like approval, to modify, change, or terminate any such plan or agreement and, in such event, the terms, conditions, and provisions of this lease shall be deemed modified to conform to the terms, conditions, and provisions of such approved cooperative or unit plan of development or operation and, particularly, all drilling and development requirements of this lease, express or implied, shall be satisfied by compliance with the drilling and development requirements of such plan or agreement, and this lease shall not terminate or expire during the life of such plan or agreement. In the event that said above described lands or any part thereof, shall hereafter be operated under any such cooperative or unit plan of development or operation whereby the production therefrom is allocated to different portions of the land covered by said plan, then the production allocated to any particular tract of land shall, for the purpose of computing the royalties to be paid hereunder to Lessor, be regarded as having been produced from the particular tract of land to which it is allocated and not to any other tract of land; and the royalty payments to be made hereunder to Lessor shall be based upon production only as so allocated. Lessor shall formally express Lessor's consent to any cooperative or unit plan of development or operation adopted by Lessee and approved by any governmental agency by executing the same upon request of Lessee.

13. All express or implied covenants of this lease shall be subject to all Federal and State Laws, Executive Orders, Rules, or Regulations, and this lease shall not be terminated, in whole or in part, nor Lessee held liable for damages, for failure to comply therewith, if compliance is prevented by, or if such failure is the result of, any such Law, Order, Rule, or Regulation.

14. Lessor hereby warrants and agrees to defend the title to the lands herein described, and agrees that the Lessee shall have the right at any time to redeem for Lessor, by payment, any mortgages, taxes, or other liens on the above described lands, in the event of default of payment by Lessor and be subrogated to the rights of the holder thereof, and the undersigned Lessors, for themselves and their heirs, successors, and assigns, hereby surrender and release all right of dower and homestead in the premises described herein, insofar as said right of dower and homestead may in any way affect the purposes for which this lease is made, as recited herein.

15. Extension of Primary Term. For the consideration herein recited, Lessor hereby grants to Lessee the exclusive right and option to extend the primary term of this lease for five (5) additional years by mailing to Lessor at the address listed on this lease, on or before the end of this primary term, a bonus consideration equal to one hundred thirty three and one-third percent (133.34%) of the bonus consideration originally paid for this lease, which payment shall represent payment in full of

consideration for this extension.

16. Should any one or more of the parties hereinabove named as Lessor fail to execute this lease, it shall nevertheless be binding upon all such parties who do execute it as Lessor. The word "Lessor," as used in this lease, shall mean any one or more or all of the parties who execute this lease as Lessor. All the provisions of this lease shall be binding on the heirs, successors, and assigns of Lessor and Lessee.

IN WITNESS WHEREOF, this instrument is executed as of the date first above written.

Lannie K. Burnside
Lannie K. Burnside, AKA Lanny K. Burnside

Kelly P. Burnside
Kelly P. Burnside

STATE OF UTAH _____ }
COUNTY OF EMERY } ss

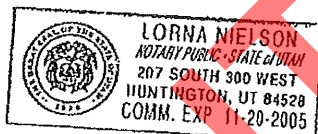
ACKNOWLEDGMENT--INDIVIDUAL

BEFORE ME, the undersigned, a Notary Public, in and for said County and State, on this 19th day of Aug, 2005 personally appeared Lannie K. Burnside, AKA Lanny K. Burnside and Kelly P. Burnside, husband and wife, to me known to be the identical person(s) described in and who executed the within and foregoing instrument of writing and acknowledged to me that they duly executed the same as their free and voluntary act and deed for the purposes therein set forth.

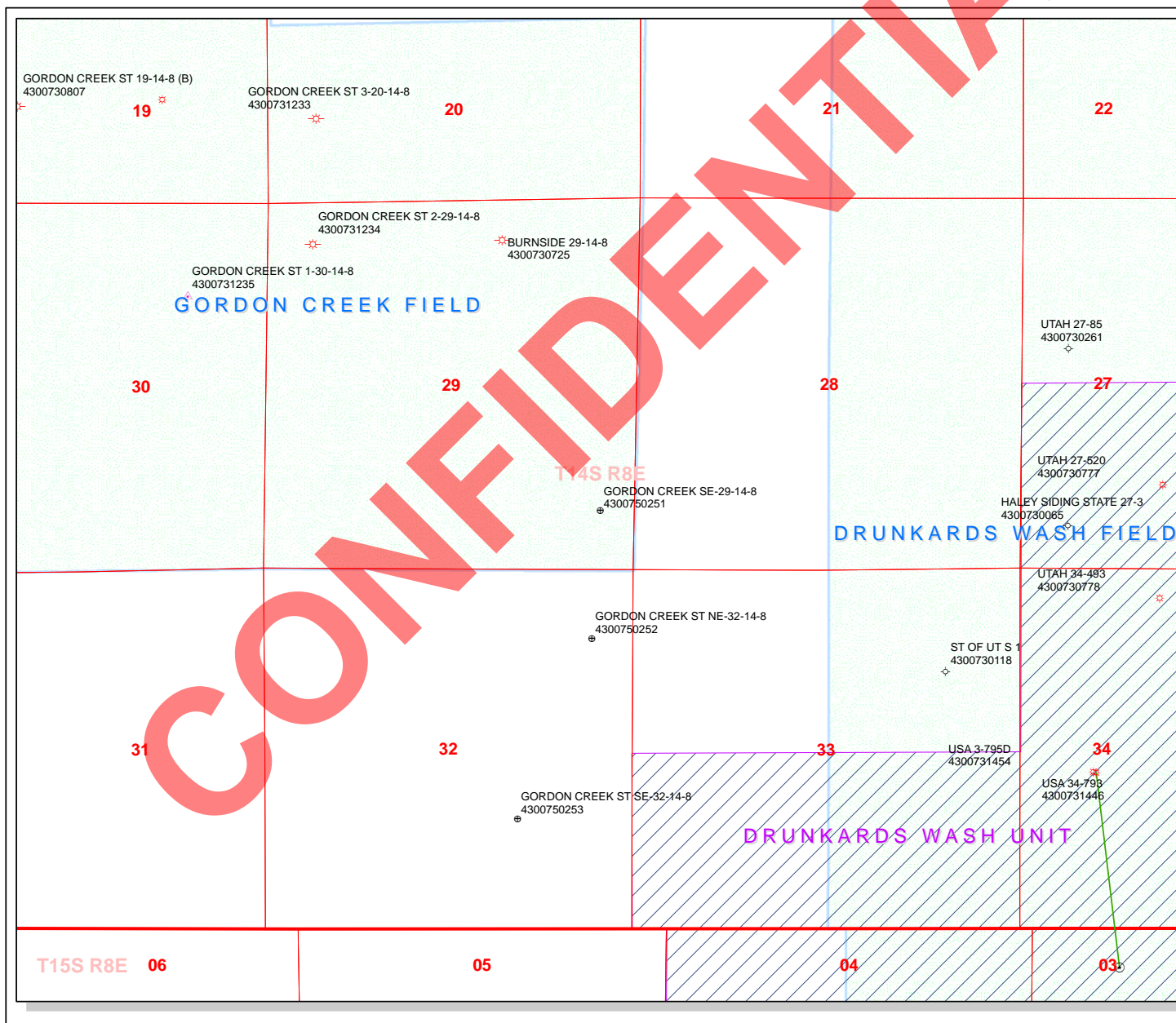
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year last above written.

My Commission Expires 11-20-2005

Lorna Nielson
Notary Public

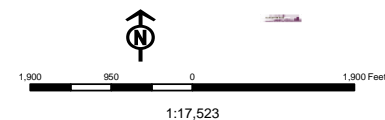
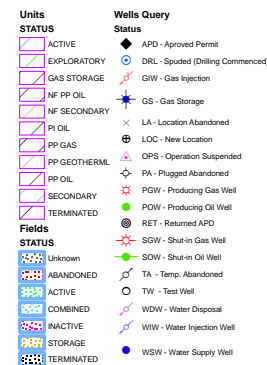


CONFIDENTIAL



API Number: 4300750251
Well Name: GORDON CREEK SE-29-14-8
Township T14.4 . Range R0.8 . Section 29
Meridian: SLBM
Operator: GORDON CREEK, LLC

Map Prepared:
Map Produced by Diana Mason



Well Name	GORDON CREEK, LLC GORDON CREEK SE-29-14-8 430075			
String	SURF	PROD		
Casing Size(in)	8.625	5.500		
Setting Depth (TVD)	450	4127		
Previous Shoe Setting Depth (TVD)	0	450		
Max Mud Weight (ppg)	8.7	10.0		
BOPE Proposed (psi)	500	3000		
Casing Internal Yield (psi)	2950	7740		
Operators Max Anticipated Pressure (psi)	1700	7.9		

Calculations	SURF String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	204	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	150	YES <input type="text" value="air drill"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	105	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	105	NO <input type="text" value="OK"/>
Required Casing/BOPE Test Pressure=		450	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	PROD String	5.500	"
Max BHP (psi)	.052*Setting Depth*MW=	2146	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	1651	YES <input type="text" value=""/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1238	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1337	NO <input type="text" value="Reasonable"/>
Required Casing/BOPE Test Pressure=		3000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		450	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="text" value=""/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text" value=""/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="text" value=""/>
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="text" value=""/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text" value=""/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="text" value=""/>
Required Casing/BOPE Test Pressure=			psi

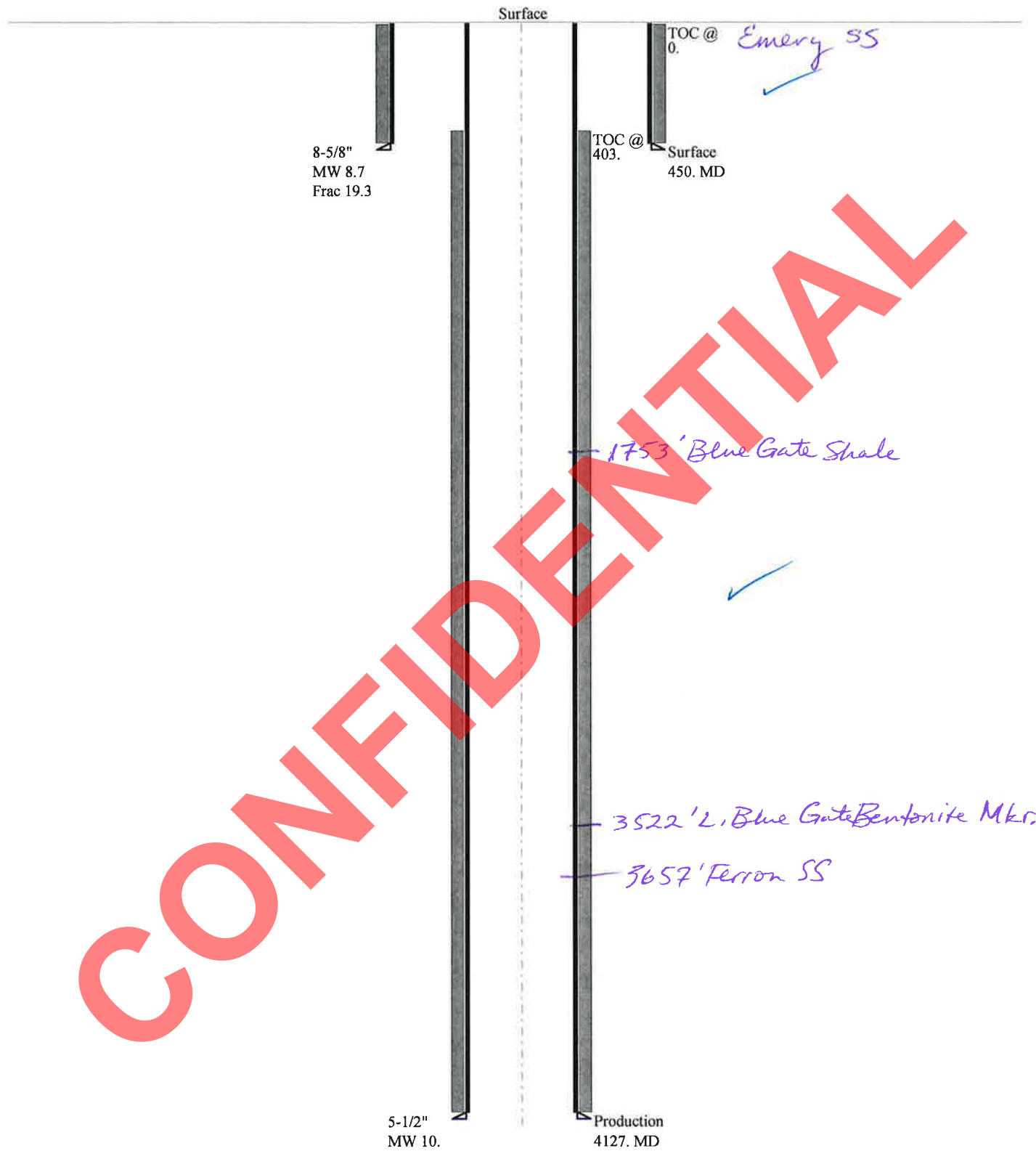
*Max Pressure Allowed @ Previous Casing Shoe=

psi *Assumes 1psi/ft frac gradient

CONFIDENTIAL

43007502510000 GORDON CREEK SE-29-14-8

Casing Schematic



Well name:	43007502510000 GORDON CREEK SE-29-14-8	
Operator:	GORDON CREEK, LLC	
String type:	Surface	Project ID: 43-007-50251
Location:	CARBON COUNTY	

Design parameters:**Collapse**

Mud weight: 8.700 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 80 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 396 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 450 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.

Neutral point: 391 ft

Non-directional string.**Re subsequent strings:**

Next setting depth: 4,127 ft
Next mud weight: 10.000 ppg
Next setting BHP: 2,144 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 450 ft
Injection pressure: 450 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	450	8.625	24.00	J-55	ST&C	450	450	7.972	2317
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	203	1370	6.736	450	2950	6.56	10.8	244	22.59 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Mining

Phone: 801 538-5357
FAX: 801-359-3940

Date: October 13, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 450 ft, a mud weight of 8.7 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43007502510000 GORDON CREEK SE-29-14-8	
Operator:	GORDON CREEK, LLC	
String type:	Production	Project ID: 43-007-50251
Location:	CARBON COUNTY	

Design parameters:**Collapse**

Mud weight: 10.000 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 132 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 403 ft

Burst

Max anticipated surface pressure: 1,236 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 2,144 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Non-directional string.

Tension is based on air weight.
Neutral point: 3,501 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	4127	5.5	17.00	N-80	LT&C	4127	4127	4.767	23261
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2144	6290	2.934	2144	7740	3.61	70.2	348	4.96 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Mining

Phone: 801 538-5357
FAX: 801-359-3940

Date: October 13, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 4127 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator	GORDON CREEK, LLC				
Well Name	GORDON CREEK SE-29-14-8				
API Number	43007502510000	APD No	4703	Field/Unit	GORDON CREEK
Location: 1/4,1/4	SESE	Sec	29	Tw	14.0S
		Rng	8.0E	869	FSL 472 FEL
GPS Coord (UTM)		Surface Owner	Lannie K. Burnside		

Participants

M. Jones (UDOGM), Barry Brumwell, Steve Lessar, Larry Williams (Tbird), A. Childs, M. Childs (Talon), Lannie Burnside (surface owner).

Regional/Local Setting & Topography

Staked location sits in the upper Gordon Creek area of Carbon County, Utah. Major drainages dominate the area. The location is east of Corner Canyon. Access will begin at the county road in section 28, proceed across SITLA lands via a temporary ROW permit through SITLA while a permanent ROW is developed. Access will continue further onto Burnside property to the proposed well pad. Access is then planned to proceed further to the south to access other SITLA surface and other potential well pads. Deep cut drainages are abundant and will need attention and consideration during all phases of this field's development and operations. Consideration to drainage diversion and control where possible is mandatory. A pit was discussed during the pre-site. This pit would potentially be a centralized pit that cuttings and drill fluids would be trucked to via vac trucks. A diversion above the location was discussed during the pre-site to keep run-off from the hill spilling onto the well pad. How the access would continue past the location was discussed with the operator and the landowner. Mr. Burnside was satisfied with the plans on his property during the pre-site inspection.

Surface Use Plan

Current Surface Use

Grazing
Wildlife Habitat

New Road Miles

1

Well Pad

Width 210 **Length** 285

Src Const Material

Onsite

Surface Formation

Ancillary Facilities

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Sagebrush, grasses, pinion.

Soil Type and Characteristics

rocky clay loam.

Erosion Issues Y

Erosive upon disturbance.

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? Y

Divert drainages around and away from access road and well pad.

Berm Required? Y

Berm the location to prevent fluids from entering and or leaving the well pad.

Erosion Sedimentation Control Required? N

Paleo Survey Run? N Paleo Potential Observed? N Cultural Survey Run? N Cultural Resources? N

Reserve Pit**Site-Specific Factors****Site Ranking**

Distance to Groundwater (feet)	>200	0
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)	>1320	0
Native Soil Type	High permeability	20
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)	10 to 20	5
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
Final Score		30

1 Sensitivity Level

Characteristics / Requirements

Dugout earthen pit is planned. Dimensions will be 100' x 50' x 10'. This is planned as a centrally located pit that will handle cuttings and fluids from 3 to 4 other wells being drilled in the area. Those cuttings and fluids will be drilled in a closed loop type system and transported via vac truck to this pit for storage and potentially permanent disposal.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 16 Pit Underlayment Required? N

Other Observations / Comments

Mark Jones
Evaluator

10/4/2011
Date / Time

Application for Permit to Drill Statement of Basis

10/27/2011

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
4703	43007502510000	LOCKED	GW	P	No
Operator	GORDON CREEK, LLC		Surface Owner-APD	Lannie K. Burnside	
Well Name	GORDON CREEK SE-29-14-8		Unit		
Field	GORDON CREEK		Type of Work	DRILL	
Location	SESE 29 14S 8E S 869 FSL 472 FEL GPS Coord (UTM)		496292E 4380239N		

Geologic Statement of Basis

Tunderbird Energy proposes to drill the well to a total depth of 4,127' and plans to set surface casing from 0'-450'. The surface string will be drilled using air unless hole conditions require the need to "mud-up" with water and gel chem. Within a 10,000 foot radius of the center of section 29, there are 116 filed water rights, however, only two are subsurface groundwater rights. Gordon Creek, LLC, has applied to drill a water-well to produce 4 acre-feet of water for oil & gas field operations. Klabzuba Oil & Gas, Inc. has a water supply well for oil & gas field operations, however, no other well information is available; it is assumed that the water is being drawn from the Emery Sandstone. This location is within a small north-south trending graben valley. The poorly permeable silty soil has been formed from the erosion of the Upper Blue Gate Member of the Mancos Shale. Several units of the Emery Sandstone Member of the Mancos Shale are present at the near surface or within the subsurface, these strata should be included within the interval to be protected by the surface casing string. The operator should be informed of the likelihood of these units being water saturated and to respond to protecting these zones by extending the surface casing as necessary. Proposed surface casing and cement should adequately isolate any shallow zones containing water.

Ammon McDonald
APD Evaluator

10/13/2011
Date / Time

Surface Statement of Basis

Staked location sits in the upper Gordon Creek area of Carbon County, Utah. Major drainages dominate the area. The location is east of Corner Canyon. Access will begin at the county road in section 28, proceed across SITLA lands via a temporary ROW permit through SITLA while a permanent ROW is developed. Access will continue further onto Burnside property to the proposed well pad. Access is then planned to proceed further to the south to access other SITLA surface and other potential well pads. Deep cut drainages are abundant and will need attention and consideration during all phases of this field's development and operations. Consideration to drainage diversion and control where possible is mandatory. A pit was discussed during the pre-site. This pit would potentially be a centralized pit that cuttings and drill fluids would be trucked to via vac trucks. A diversion above the location was discussed during the pre-site to keep run-off from the hill spilling onto the well pad. How the access would continue past the location was discussed with the operator and the landowner. Mr. Burnside was satisfied with the plans on his property during the pre-site inspection.

Mark Jones
Onsite Evaluator

10/4/2011
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils shall be properly installed and maintained in the reserve pit.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location. SPECIFICALLY: A diversion ditch will be necessary along the east side of the location to allow storm runoff to move south to north.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

RECEIVED: October 27, 2011

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 9/27/2011**WELL NAME:** GORDON CREEK SE-29-14-8**OPERATOR:** GORDON CREEK, LLC (N3245)**CONTACT:** Barry Brumwell**API NO. ASSIGNED:** 43007502510000**PHONE NUMBER:** 403 453-1608**PROPOSED LOCATION:** SESE 29 140S 080E**SURFACE:** 0869 FSL 0472 FEL**BOTTOM:** 0869 FSL 0472 FEL**COUNTY:** CARBON**LATITUDE:** 39.57185**UTM SURF EASTINGS:** 496292.00**FIELD NAME:** GORDON CREEK**LEASE TYPE:** 4 - Fee**LEASE NUMBER:** Burnside Bk599 Pg645**SURFACE OWNER:** 4 - Fee**Permit Tech Review:** ☒**Engineering Review:** ☒**Geology Review:** ☒**LONGITUDE:** -111.04317**NORTHINGS:** 4380239.00**PROPOSED PRODUCING FORMATION(S):** FERRON SANDSTONE**COALBED METHANE:** NO**RECEIVED AND/OR REVIEWED:**

- ☒ **PLAT**
- ☒ **Bond:** STATE - RLB0010790
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☒ **Water Permit:** 91-5193
- ☐ **RDCC Review:**
- ☒ **Fee Surface Agreement**
- ☐ **Intent to Commingle**
- Commingle Approved**

LOCATION AND SITING:

- ☐ **R649-2-3.**
- Unit:**
- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☒ **Drilling Unit**
- Board Cause No:** Cause 248-01
- Effective Date:** 5/16/2002
- Siting:** 460' Fr Outer Bdry & 920' Fr Other Wells
- ☐ **R649-3-11. Directional Drill**

Comments: Presite Completed**Stipulations:** 5 - Statement of Basis - Bhill**RECEIVED:** October 27, 2011



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: GORDON CREEK SE-29-14-8

API Well Number: 43007502510000

Lease Number: Burnside Bk599 Pg645

Surface Owner: FEE (PRIVATE)

Approval Date: 10/27/2011

Issued to:

GORDON CREEK, LLC, 1179 E Main #345, Price, UT 84501

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 248-01. The expected producing formation or pool is the FERRON SANDSTONE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels
- OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:

A handwritten signature in black ink, appearing to read "John Rogers", written over a horizontal line.

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: GORDON CREEK, LLC		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: 1179 E Main #345, Price, UT, 84501		8. WELL NAME and NUMBER: GORDON CREEK SE-29-14-8
PHONE NUMBER: 403 453-1608 Ext		9. API NUMBER: 43007502510000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0869 FSL 0472 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 29 Township: 14.0S Range: 08.0E Meridian: S		9. FIELD and POOL or WILDCAT: GORDON CREEK
		COUNTY: CARBON
		STATE: UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/30/2013	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> ACIDIZE</div> <div style="width: 33%;"><input type="checkbox"/> ALTER CASING</div> <div style="width: 33%;"><input type="checkbox"/> CASING REPAIR</div> <div style="width: 33%;"><input type="checkbox"/> CHANGE TO PREVIOUS PLANS</div> <div style="width: 33%;"><input type="checkbox"/> CHANGE TUBING</div> <div style="width: 33%;"><input type="checkbox"/> CHANGE WELL NAME</div> <div style="width: 33%;"><input type="checkbox"/> CHANGE WELL STATUS</div> <div style="width: 33%;"><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS</div> <div style="width: 33%;"><input type="checkbox"/> CONVERT WELL TYPE</div> <div style="width: 33%;"><input type="checkbox"/> DEEPEN</div> <div style="width: 33%;"><input type="checkbox"/> FRACTURE TREAT</div> <div style="width: 33%;"><input type="checkbox"/> NEW CONSTRUCTION</div> <div style="width: 33%;"><input type="checkbox"/> OPERATOR CHANGE</div> <div style="width: 33%;"><input type="checkbox"/> PLUG AND ABANDON</div> <div style="width: 33%;"><input type="checkbox"/> PLUG BACK</div> <div style="width: 33%;"><input type="checkbox"/> PRODUCTION START OR RESUME</div> <div style="width: 33%;"><input type="checkbox"/> RECLAMATION OF WELL SITE</div> <div style="width: 33%;"><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION</div> <div style="width: 33%;"><input type="checkbox"/> REPERFORATE CURRENT FORMATION</div> <div style="width: 33%;"><input type="checkbox"/> SIDETRACK TO REPAIR WELL</div> <div style="width: 33%;"><input type="checkbox"/> TEMPORARY ABANDON</div> <div style="width: 33%;"><input type="checkbox"/> TUBING REPAIR</div> <div style="width: 33%;"><input type="checkbox"/> VENT OR FLARE</div> <div style="width: 33%;"><input type="checkbox"/> WATER DISPOSAL</div> <div style="width: 33%;"><input type="checkbox"/> WATER SHUTOFF</div> <div style="width: 33%;"><input type="checkbox"/> SI TA STATUS EXTENSION</div> <div style="width: 33%;"><input checked="" type="checkbox"/> APD EXTENSION</div> <div style="width: 33%;"><input type="checkbox"/> WILDCAT WELL DETERMINATION</div> <div style="width: 33%;"><input type="checkbox"/> OTHER</div> </div>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	
<input type="checkbox"/> SPUD REPORT Date of Spud:	
<input type="checkbox"/> DRILLING REPORT Report Date:	
OTHER: <input style="width: 100px;" type="text"/>	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

We were unable to drill this well during this phase of drilling operations and request a 1 year extension to the APD.

**Approved by the
Utah Division of
Oil, Gas and Mining**

Date: December 18, 2012

By: 

NAME (PLEASE PRINT) Barry Brumwell	PHONE NUMBER 403 453-1608	TITLE Vice President-Operations
SIGNATURE N/A	DATE 12/13/2012	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43007502510000

API: 43007502510000

Well Name: GORDON CREEK SE-29-14-8

Location: 0869 FSL 0472 FEL QTR SESE SEC 29 TWP 140S RNG 080E MER S

Company Permit Issued to: GORDON CREEK, LLC

Date Original Permit Issued: 10/27/2011

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☒ Yes ☐ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Barry Brumwell

Date: 12/13/2012

Title: Vice President-Operations Representing: GORDON CREEK, LLC



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

January 8, 2014

Gordon Creek, LLC
1179 E Main #345
Price, UT 84501

Re: APD Rescinded – Gordon Creek SE-29-14-8, Sec. 29 T.14S, R.8E,
Carbon County, Utah API No. 43-007-50251


Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on October 27, 2011. On December 13, 2012, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective January 8, 2014.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,


Diana Mason
Environmental Scientist

cc: Well File
Brad Hill, Technical Service Manager

